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| 10/728,752 | 12/08/2003 | Satoshi Ando | 2003_1760A | 9329 |
| 513 7590 08/03/2007 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021 | | | EXAMINER MIRZADEGAN, SAEED S | |
| | | | ART UNIT 2144 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/728,752

Applicant(s)

ANDO ET AL.

Examiner

Saeed S. Mirzadegan

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/23/2004, 9/20/2005, 7/2/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to Applicant's preliminary amendment filed 3/23/2004.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 3/23/2004 & 9/20/2005 & 7/2/2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. The drawings are objected to because **Fig. 3** shows only an internal link for (X1.3) and is missing the external link; **Fig. 6(a)** row 11, 2nd column, recites "X0.2" which is incorrect and should be changed to a "—"; **Fig 13(b)** incorrectly recites "resercation message", where it should read "reservation message"; **Fig. 13(c)** incorrectly recites "band" number of times, where it should read "bandwidth"; **Figures 5(a), 5(b), 5(c), 5(d), 5(e), 6(a), 6(b) & 10**, incorrectly recites "opponent", where It should read "counter part". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

Art Unit: 2144

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. **Figures 13(a), 13(b), 13(c) & 14** should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: Page 1, ¶0004, line 3, recites "Fig. 13"; where it should read, "Fig. 13(a)".

Appropriate correction is required.

7. The disclosure is objected to because of the following informalities: Page 5, ¶0036, line 2, recites "similar to that during the reservation cannot be stored"; where it should read, "similar to the quality insured during the reservation cannot be insured".

Appropriate correction is required.

8. The disclosure is objected to because of the following informalities: Page 10, ¶0079, line 4 recites "one"; where it should read, "two".

Appropriate correction is required.

9. The disclosure is objected to because of the following informalities: In numerous places the phrase "band" is recited; where it should read, "bandwidth".

Appropriate correction is required.

10. The disclosure is objected to because of the following informalities: Page 13, line 1, the recited phrase "be an either band or" should read, "be either a bandwidth or".

Appropriate correction is required.

Art Unit: 2144

11. The disclosure is objected to because of the following informalities: Page 13, ¶0096, line 5, the phrase "opposes" is recited; where it should read, "corresponds to"

Appropriate correction is required.

12. The disclosure is objected to because of the following informalities: In numerous places the phrase "opponent" is recited; where it should read, "counter-part".

Appropriate correction is required.

13. The disclosure is objected to because of the following informalities: Page 14, ¶0104, line 1 recites "unit 33 is possible to"; where it should read, "unit 33 is able to".

Appropriate correction is required.

14. The disclosure is objected to because of the following informalities: Page 21, ¶0161, line 1 recites "in any one of moment"; where it should read, "at any time".

Appropriate correction is required.

15. The disclosure is objected to because of the following informalities: Page 21, ¶0161, line 4 recites "packets is difficult"; where it should read, "packets makes it difficult".

Appropriate correction is required.

Art Unit: 2144

16. The disclosure is objected to because of the following informalities: Page 21, ¶0166, line 3 recites "relays are possible to"; where it should read, "relays are able to".

Appropriate correction is required.

Claim Objections

17. **Claims 5 & 10** are objected to because of the following informalities: The recited limitation "band" is inappropriate. It should read "bandwidth".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

18. **Claim 7** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

19. Regarding **claim 7**, the limitation "Weaves the path" is not defined or supported by the disclosure, which renders the claim indefinite. The term "Weaves the path" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. The link has been rendered indefinite by use of the

Art Unit: 2144

aforementioned term. Given the indefinite nature of this claim, the examiner reasonably understands the "Weaves the path" to mean "connects".

20. **Claim 7** recites the limitation "the same link" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by (Ashish Verma & Pallapa Venkataram: "Performance of Centralized Bandwidth Reservation Protocol in AVPNs"), hereinafter "Verma & Venkataram".

22. Regarding **Claim 1**, "Verma & Venkataram" teach, a resources-reserving method comprising:

a. defining a communication path as a link assembly for interconnecting interfaces (**Page 48, ¶1.1, lines 1-4**).

b. reserving resources on the communication path in accordance with the content of requested reservation (**Page 52, ¶3, lines 5-7**) when all links that form

the communication path can be connected together in accordance with the content of the requested reservation (**Page 53, ¶3.3, lines 1-5**).

23. **Claims 2-5, 8-15** are rejected under 35 U.S.C. 102(e) as being anticipated by Oishi et al. (US PG Pub No. 2002/0120745) hereinafter "Oishi".

24. Regarding **Claim 2** Oishi teaches, a resources-reserving method comprising:
reserving communication resources in a gang of apparatus that include a transmitter operable to transmit packets, a relay operable to relay the packets, and a receiver operable to receive the packets (**Page 1, ¶0009, Fig. 1 & Fig. 2**);

c. defining a link for interconnecting respective interfaces of two apparatus selected from the gang of apparatus (**Page 1, ¶0009, Fig.1**);

d. defining a path between said transmitter and said receiver as an assembly of the links (**Page 1, ¶0009, Fig.1 & Fig. 2**);

e. checking all of the links that form the path to examine how the links are connected together (**Page 4, ¶0057, S2 in Fig. 9**);

f. reserving the communication resources in accordance with content of requested reservation when all of the links that form the path are found to be connected together in accordance with the content of the requested reservation (Page 4, ¶0060, S7 in Fig. 9).

25. Regarding **Claim 3** Oishi teaches, a resources-reserving method as defined in claim 2, further comprising; refusing to reserve the resources when at least one of the links that form the path fails to meet the content of the requested reservation (Page 6, ¶0098, S5 in Fig. 10).

26. Regarding **Claim 4** Oishi teaches, a resources-reserving method as defined in claim 2, wherein a reservation controller different from said relay (10 in Fig. 2, **Bandwidth Management apparatus**) practices batch processing of handling the links, checking the links to examine how the links can be connected together (Page 4, ¶0057, S2 in Fig. 9), and reserving the resources (Page 4, ¶0060, S7 in Fig. 9).

27. Regarding **Claim 5** Oishi teaches, a resources-reserving method as defined in claim 2, wherein the content of the requested reservation includes one of a band and priority, or both of them (S1 in Fig. 5).

28. Regarding **Claim 8** Oishi teaches, a packet communication system comprising;

- g. a gang of apparatus including a transmitter operable to transmit packets, a relay operable to relay the packets, and a receiver operable to receive the packets (**Page 1, ¶0009, Fig. 1 & Fig. 2**);
- h. a reservation controller (**10 in Fig. 2, Bandwidth Management apparatus**) operable to define a link for interconnecting respective interfaces of two apparatus selected from the gang of apparatus (**Page 1, ¶0009, Fig.1**);
- i. to practice batch processing of checking a connected state of each of the links, and of reserving resources (**Page 4, ¶0057, S2 in Fig. 9**);
- j. the reservation controller operable to define a path between said transmitter and said receiver as an assembly of the links (**Page 1, ¶0009, Fig.1 & Fig. 2**);
- k. the reservation controller operable to check all of the links that form the path to examine how the links are connected together (**Page 4, ¶0057, S2 in Fig. 9**);
- l. the reservation controller operable to reserve the resources in accordance with content of requested reservation when all of the links that form the path are

found to be connected together in accordance with the content of the requested reservation (**Page 4, ¶0060, S7 in Fig. 9**).

29. Regarding **Claim 9** Oishi teaches, a resources-reserving method as defined in claim 8, wherein said reservation controller refuses to reserve the resources when at least one of the links that form the path fails to meet the content of the requested reservation (**Page 6, ¶0098, S5 in Fig. 10**).

30. Regarding **Claim 10** Oishi teaches, a packet communication system as defined in claim 8, wherein the content of the requested reservation includes one of a band and priority, or both of them. (**S1 in Fig. 5**).

31. Regarding **Claim 13** Oishi teaches, a packet communication system as defined in claim 8, wherein said reservation controller comprises: a reservation-receiving unit operable to receive a reservation of the resources (**20 in Fig. 2**);

m. a connection information control unit operable to govern a connected state of each of the links (**14 in Fig.2**);

n. a connection information-searching unit operable to search said connection information control unit for a connected state of a specified one of the links (**15A in Fig 2**);

o. a reservation-determining unit operable to compare a connected state of the link between said transmitter and said receiver with content of requested reservation received by said reservation-receiving unit, thereby determining whether all of the links that form the path are found to be connected together in accordance with the content of the requested reservation (**15 in Fig 2**).

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

33. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

34. **Claims 6, 7, 11, 12, 14, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi, in view of Zheng et al. (US PG Pub. No. 2002/0150062) hereinafter "Zheng".

Art Unit: 2144

35. Regarding **Claims 6, 11** Oishi does not teach the method and communication system of claims 2 and 8, wherein the links that form the path include real and virtual links in which the real link forms a path dependant upon respective positions of said transmitter and/or said receiver during reservation, while the virtual link forms a path dependant upon respective moved positions of said transmitter and/or said receiver.

36. In the same field of endeavor Zheng teaches, **(Fig. 2, ¶0043, 30-32-34-36-38-48)** the link that forms the path include real link which is dependent upon the respective position of the **(Fig. 2, 30)** respective transmitter and/or **(Fig. 2, 48)** receiver during reservation. **(Fig. 2, ¶0046, 30-40-42-36-38-48)** the link that forms the path include virtual link, which is dependent upon respective moved positions of said **(Fig. 2, 30)** transmitter and/or said **(Fig. 2, 48)** receiver.

37. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Oishi with the teachings of Zheng, **(see Zheng, ¶0058)** for the purpose of enabling RSVP to work with mobile IP. Oishi provides motivation to combine by stating a method and apparatus that allow ease in estimating bandwidth for new bandwidth reservation **(see Oishi, ¶0007)**.

38. Regarding **Claims 7, 12** Oishi discloses, **(10 in Fig. 2, Bandwidth Management apparatus)** a reservation controller.

Art Unit: 2144

39. Regarding **Claims 7, 12** Oishi does not teach , the method and communication system as defined in claim 6 & 11, wherein when the same link weaves the path dependant upon respective positions of said transmitter and/or said receiver during reservation with the path dependant upon respective moved positions of said transmitter and/or said receiver, then said reservation controller assumes that only a single path is present in the same link

40. In the same field of endeavor Zheng teaches, (**¶0046 & ¶0047**) **when two types of links (virtual and real) connect a transmitter to a receiver, a single path is created.**

41. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Oishi with the teachings of Zheng, (**see Zheng, ¶0058**) for the purpose of enabling RSVP to work with mobile IP. Oishi provides motivation to combine by stating a method and apparatus that allow ease in estimating bandwidth for new bandwidth reservation (**see Oishi, ¶0007**).

42. Regarding **Claim 14** Oishi discloses, (**10 in Fig. 2, Bandwidth Management apparatus**) the reservation controller in a packet communication system as defined in claim 13.

Art Unit: 2144

43. Regarding **Claim 14** Oishi does not teach, the packet communication system as defined in claim 13, wherein said reservation controller comprises: a virtual link information control unit operable to govern a connected state of each virtual link; and a virtual link information-searching unit operable to search said virtual link information control unit for a connected state of a specified one of the virtual links.

44. In the same field of endeavor Zheng teaches, (Fig. 2, ¶0043, 30-32-34-36-38-48) the link that forms the path include real link which is dependent upon the respective position of the (Fig. 2, 30) respective transmitter and/or (Fig. 2, 48) receiver during reservation. (Fig. 2, ¶0046, 30-40-42-36-38-48) the link that forms the path include virtual link, which is dependent upon respective moved positions of said (Fig. 2, 30) transmitter and/or said (Fig. 2, 48) receiver.

45. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Oishi with the teachings of Zheng, (see Zheng, ¶0058) for the purpose of enabling RSVP to work with mobile IP. Oishi provides motivation to combine by stating a method and apparatus that allow ease in estimating bandwidth for new bandwidth reservation (see Oishi, ¶0007).

46. Regarding **Claim 15** Oishi discloses, the packet communication of claim 14, wherein the transmitter and receiver includes a link information-registration unit operable to register information on the real link that form a path.

47. Regarding **Claim 15** Oishi does not teach, a virtual link information-registering unit operable to register information on virtual links that form a path dependent upon respective moved positions of said transmitter and/or said receiver.

48. In the same field of endeavor Zheng teaches, **(Fig. 2, ¶0043, 30-32-34-36-38-48)** the link that forms the path include real link which is dependent upon the respective position of the **(Fig. 2, 30)** respective transmitter and/or **(Fig. 2, 48)** receiver during reservation. **(Fig. 2, ¶0046, 30-40-42-36-38-48)** the link that forms the path include virtual link, which is dependent upon respective moved positions of said **(Fig. 2, 30)** transmitter and/or said **(Fig. 2, 48)** receiver.

49. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Oishi with the teachings of Zheng, **(see Zheng, ¶0058)** for the purpose of enabling RSVP to work with mobile IP. Oishi provides motivation to combine by stating a method and apparatus that allow ease in estimating bandwidth for new bandwidth reservation **(see Oishi, ¶0007)**.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to form PTO-892 (Notice of Reference Cited) for a list of relevant prior art.

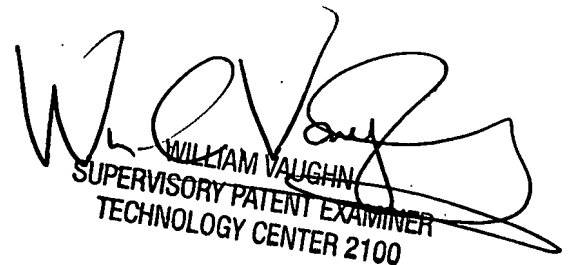
Art Unit: 2144

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeed S. Mirzadegan whose telephone number is 571-270-3044. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SSM


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